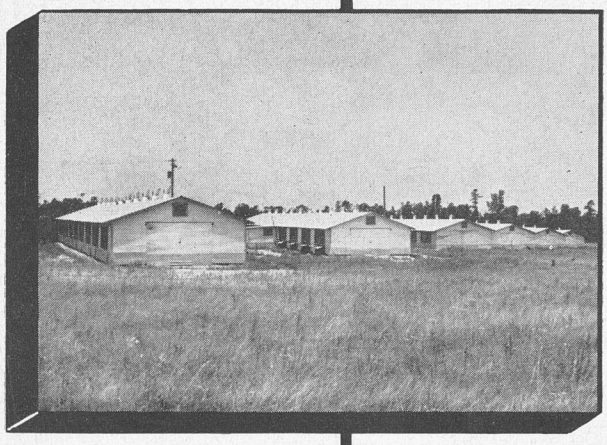
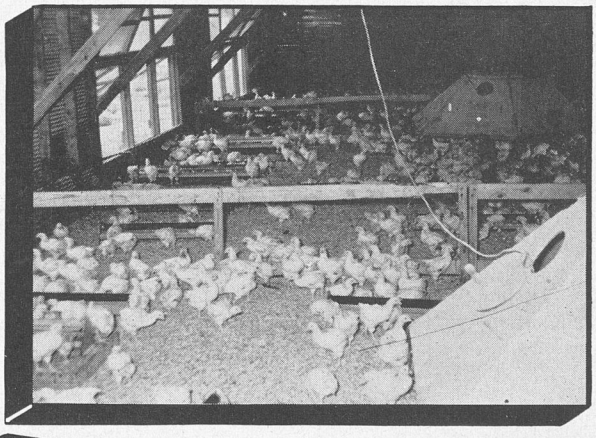
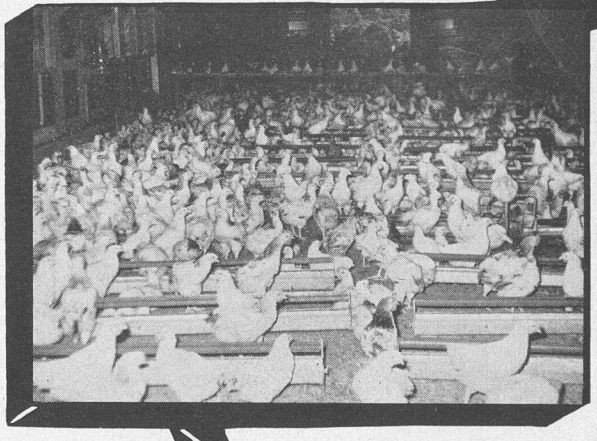
BROILER PRODUCTION







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BROILER PRODUCTION

By
W. J. MOORE, *Extension Poultry Husbandman*
Texas A. & M. College System

A YEAR ROUND BUSINESS

Broiler production in Texas has become a specialized industry that has no "opened" and "closed" seasons. Modern breeding and feeding methods permit year-round production. Operating on an all-year basis enables the raiser to take full advantage of his facilities and assures a steady source of income.

While broilers may be raised successfully and profitably as a secondary project or enterprise on the farm the economies brought about by large volume production results in a higher profit to the broiler grower. The large scale producer is better able to establish and keep a continuous market and man power and equipment can be used at maximum efficiency.

By using continuous year-round production on a large scale plus taking advantage of the good breeding, good housing, adequate equipment, and a sound plan of management and feeding, a broiler business can be established on a profitable basis.

QUALITY CHICKS

The best breeding is necessary for quality broilers. Good quality raw material is needed to produce a high quality finished product. The basic raw material that makes a broiler is the chick. To produce quality broilers, the chicks must be of the best stock.

DESIRABLE QUALITIES

Feathered quickly with no pin feathers at market age.

Fast growth for best use of feed.

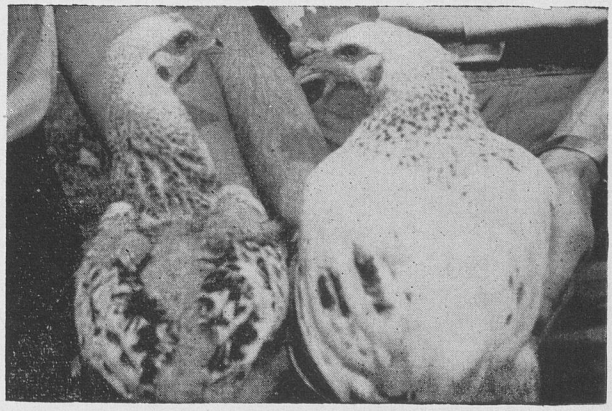
Uniformity.

Good fleshing, blocky meat type, well rounded and deeply fleshed breasts.

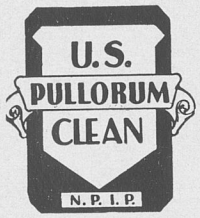
Vigor—Resistance to common broiler diseases.

Color—Bright red combs creamy body color, light feathered bird preferred by processors.

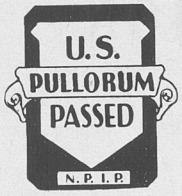
Slow feathering chicks on left, fast feathering on right.



Same birds at market age.



Best



Excellent

Very Good

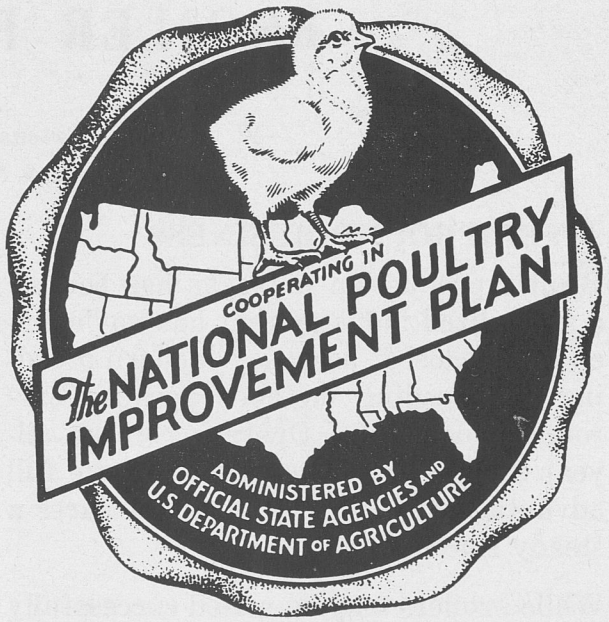
CHOOSING SOURCE OF CHICKS

Day-old broiler strain chicks with U. S. Pullorum Clean or U. S. Pullorum Passed classifications should be purchased. The chicks should be from hatcheries whose supply flocks are from recognized breeders of meat type birds.

Hatcheries operating under the National Poultry Improvement Plan offer chicks with these pullorum classifications. When purchasing chicks it is wise to remember that "bargains" or "cheap chicks" sometimes are the most expensive. Choosing the breed the market demands for finished broilers should determine the breed you select. The most popular breeds include New Hampshires, White Plymouth Rocks, Cornish-Hampshire crosses, White crosses, and Delaware-Hampshire crosses.

Many other breeds and crossbreeds are proving highly satisfactory. Choose the breed that is most popular in your area.

This house has floor line ventilation.



HOUSING

Efficiency in broiler production begins with proper housing. The cost of houses affects the cost of operation. Therefore, buildings should be constructed as inexpensively as possible. Regardless of the cost, there are a few essential requirements that must be included in a broiler house. Minimum requirements for houses include:

PROPER VENTILATION, ADEQUATE PROTECTION FROM EXTREMES OF HEAT AND COLD, DRYNESS, AMPLE FLOOR SPACE, CONVENIENCE OF OPERATION.

LOCATION

By careful planning the best available location can be used. The water supply, drainage of ground, location in regard to other buildings, and a good road all must be considered.

SIZE AND TYPE

The most popular house at the present time is a gable roof, 20 to 50 feet wide. It

is built any length, depending on the capacity desired. A 3,000 bird house is considered a minimum for efficient broiler production. Larger houses are more adaptable to automatic mechanical feeders and other equipment that cut down labor costs. The house should be built with doors in each, and wide enough for a truck or tractor to drive in to unload litter and be used in cleaning the house, thus saving labor and time.

FLOOR SPACE

Don't skimp on floor space. Overcrowding tends to reduce thrift and general health. Adequate floor space is necessary for sanitation, for providing sufficient feeders and waterers and eliminating some of the causes of an uneven flock. For most satisfactory results, provide at least three-fourths to one square foot of floor space per bird, depending upon the season and weight desired at market time. Birds that will weigh from 2.75 to 3.25 pounds at market age should have one square foot of floor space during warm months.

VENTILATION

Ventilation on the peak of the gable roofs will prove beneficial. Ventilation on the sides should be at two levels. That is, one side should be let down from the top and the other raised at the bottom to permit maximum circulation. A continuous supply of fresh air is a "must". It may be brought in through windows without causing a direct draft.

Jar waterers are used until the birds are old enough to use automatic waterers.

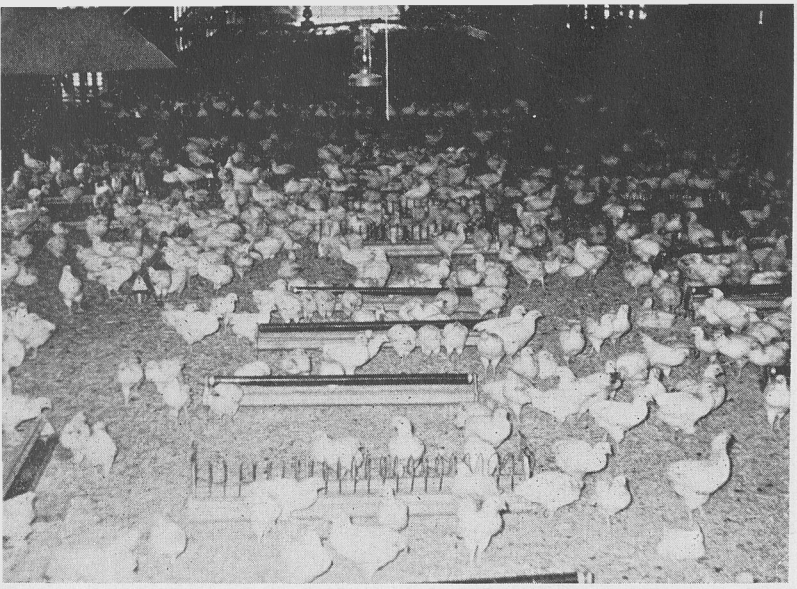
Valve-type automatic waterers are used after birds are older.

FLOORS

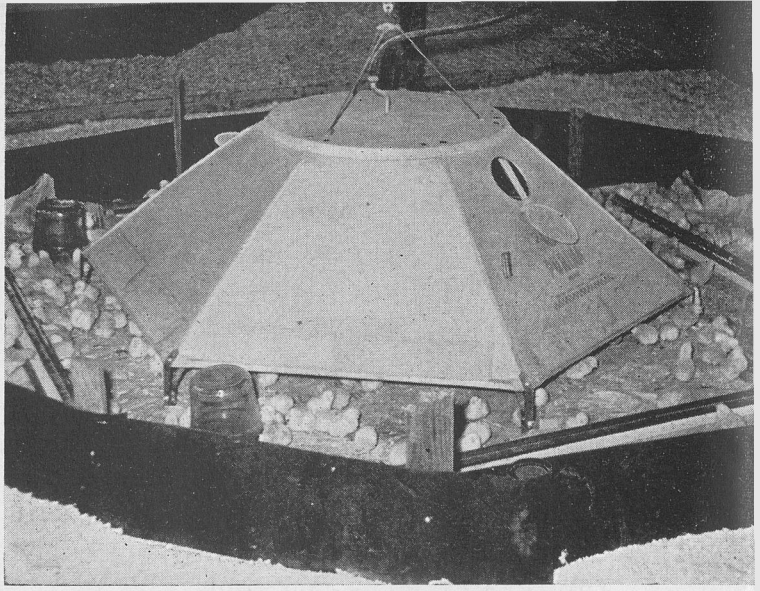
On most types of soil in broiler producing areas of Texas, a concrete floor in the broiler house is not necessary. The house can be built on a solid concrete foundation that is at least 12 inches below the ground level to prevent rodents from entering. With this type foundation, a concrete floor can be poured when and if diseases and parasites make it advisable. The floor in the broiler house should be six to eight inches above ground level.

WATERERS

Plenty of fresh water at all times assures health, fast growth and efficient feed use. Provide ample drinking space. It is far better to provide more drinking facilities than needed than to lose birds because of insufficient water being made available. For starting chicks, eight to ten glass jars or other suitable fountains will be needed for each 500. When chicks reach two or three weeks of age, most commercial broiler producers are auto-



Provide plenty of hopper space for each chick.



Brooder arrangement for the first few days.

matic waterers. The glass jars are not removed immediately at this time, but the birds are allowed to drink from these as well as the automatic waterers until they become accustomed to the automatic equipment. For every 500 broilers, two troughs, four feet long should be used. Other type automatic waterers should be used according to manufacturers' recommendations.

FEEDERS

Provide one inch of feed hopper space for each chick. At three or four weeks, increase to two inches per chick. After seven weeks, provide three inches of space per chick. Automatic or mechanical feeders are proving satisfactory. There are several types available. Manufacturers make recommendations as to the operating procedures and capacity of the machines. These recommendations should be followed if satisfactory results are to be expected. For best results with any type feeders, they should be kept "neck high".

LIGHTS

Not enough research has been done yet to make a general recommendation regarding lights. Field observations indicate that in hot weather, a considerable period of artificial light may be given broilers at night to encourage maximum feed consumption.

BROODERS

Gas brooders using natural or bottled gas are rapidly increasing in popularity. Enough money should be invested in a good brooder stove to get the best service with the least difficulty and risk. The brooder stove or hover should be good enough to give years of dependable service. Birds should be allowed at least seven square inches of space under the hover. A 60-inch hover is satisfactory to brood 500 chicks.

TEMPERATURE FOR BROODING

For the first day, brooder temperature should be about 90° at two inches above the litter at the edge of the hover. The temperature should be reduced about five degrees a week until no heat is needed. Overheating results in uncomfortable chicks that may be susceptible to diseases and stunted growth. To keep chicks close to the heat and prevent crowding in the corners, a wire guard should be placed around the brooder stove for the first four or five days. This should be set about one and one-half to two feet from the edge of the brooder stove at the start. The circle should be increased in size each day and removed at the end of one week.

FEEDING

Full feeding means profitable feeding. The quicker the broilers reach the market the more profits are made. Follow the feeding system preferred but keep them eating fresh, wholesome food and drinking clean fresh water.

Feed may be all-mash, mash and grain, or some variation of the two. The system followed is not as important as getting the feed down the chicks. The feeding system recommended by the manufacturer of the commercial feed usually gives best results.

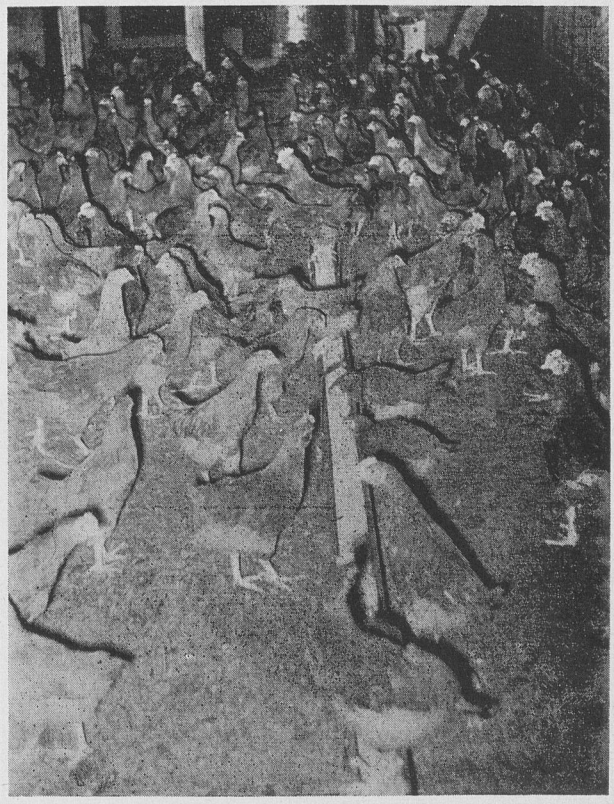
The value of a feed should be measured by results rather than price per pound. Low protein feeds usually are lower in price than high protein feeds, but rapid gains with high protein feeds usually make up the difference.

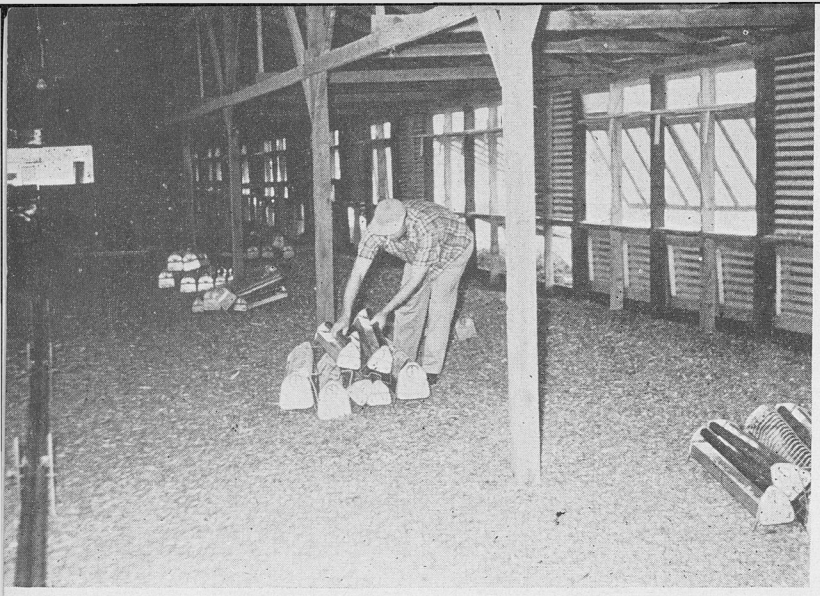
Automatic feeders save on labor costs. Several types are available.

The pounds of feed per pound of gain are what count. This can be controlled to a certain extent by full feeding from the time the chicks are started until they are sold. Fast gains are cheap gains. (2) Keep death losses down. Feeding chicks that later die must be charged to those that live. (3) Provide feed made of fresh high-quality ingredients by a good formula. (4) Avoid waste of feed from hoppers. Use hoppers of the right size and plenty of them. Fill them one-half to two-thirds full after the chicks have learned to eat.

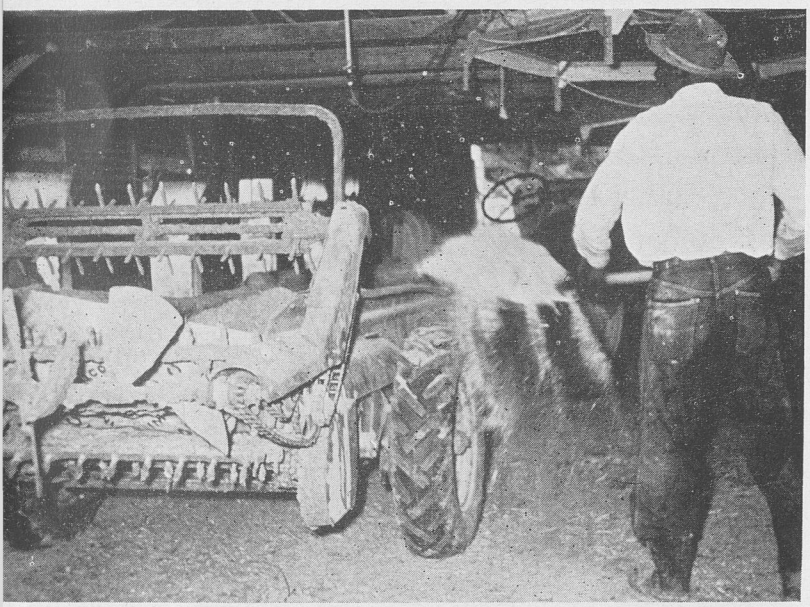
The use of sulfaquinoxaline or other proved chemicals in the broiler ration for the control of coccidiosis has become a common practice in recent years. Such feeds definitely have their place in broiler production.

Automatic feed troughs hold a supply of feed before the birds at all times.



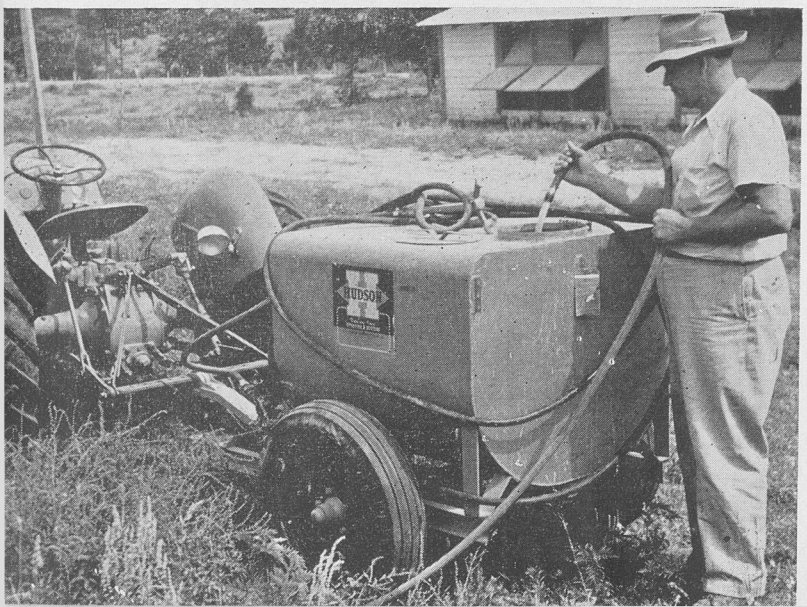


Remove all equipment from the house before cleaning starts.



A manure spreader is used here to remove litter from the house.

A pressure spray is necessary for a good job of disinfecting.



SANITATION

Sanitation means freedom from disease. It includes dryness and cleanliness. It is merely good business to follow strict sanitation practices at all times. The time and money spent in keeping the houses clean pay a big dividend in the form of healthy chicks and lower mortality rates, thus insuring a high return on investments. By a strict sanitation program costly losses can be avoided by (1) prevention or elimination of disease and parasites and (2) preventing transmission of diseases from one flock to another.

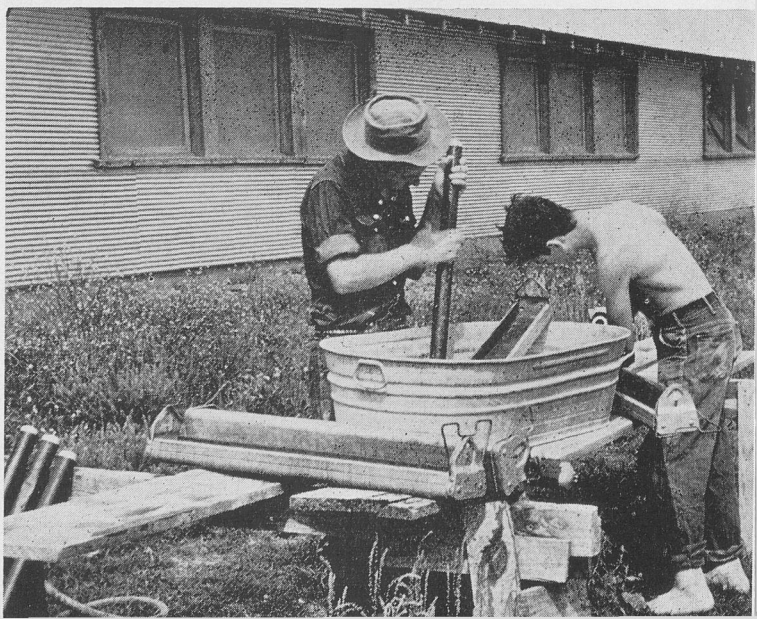
BEFORE CHICKS ARRIVE

Scrape, scrub, spray, and disinfect the houses with a good commercial disinfectant. Feeders and waterers should be scrubbed in hot suds and then disinfected with chlorine or other disinfecting solutions.

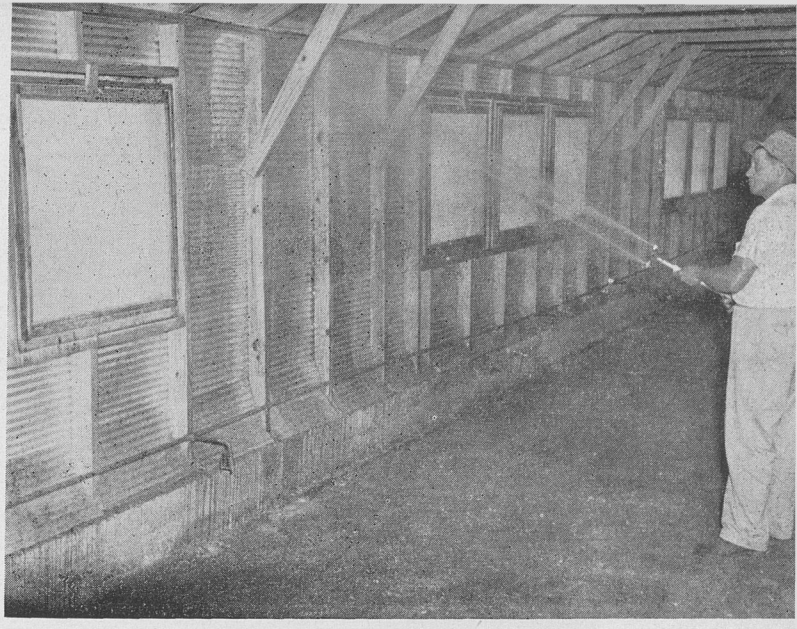
Use four to six inches of wood shavings or any good commercial litter. Cover with paper or feed sacks to keep chicks from eating litter. Cover should be removed after the second or third day when chicks have learned to use feeders.

Keep litter deep and dry at all times. When it becomes caked or wet replace

Wash and disinfect waterers daily.



Wash and disinfect feeders at least once a week.



Here a pressure sprayer is used for disinfecting walls, ceiling, and the entire house.

with fresh litter. Changing the position of feeders will prevent packing down or piling up of litter and will keep it level. New litter should be placed in the house for each brood of chicks.

AFTER CHICKS ARRIVE

Wash and disinfect feeders at least once a week. Waterers should be scrubbed and disinfected daily. Placing water fountains on wire-covered platforms helps eliminate the spread of disease that may be present in droppings or encouraged by wet areas. Visitors in the broiler house from other poultry farms should be discouraged. They may carry a disease. Shoes worn in pens where there is a disease should not be worn in other pens and houses. Soles should be disinfected by stepping on a pad soaked with disinfectant and retained in a shallow box or pan.

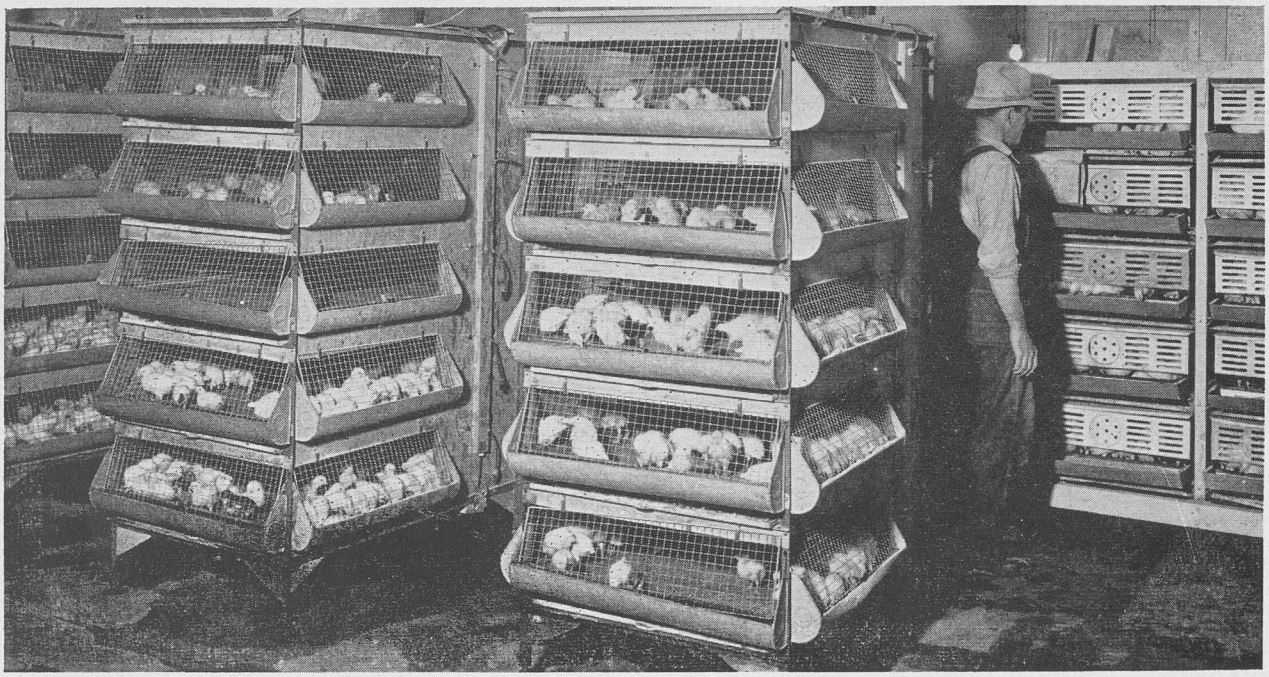
Keep chicks of one age together. Never let chicks come in contact with old hens. If possible, try to have chicks of only one age on the farm at a time.

BATTERY BROODING

Battery brooding for broiler production is not practiced extensively. When it is used, the batteries usually are placed in rooms supplied with extra heat in the fall and winter. During the hot summer months, a forced ventilation system and humidifier should be used.

With this system, broilers go through three stages of production in different buildings or rooms. The first stage is the starting battery where all chicks of the same age are brooded until they are about three weeks old. For the growing stage, from three weeks to six weeks, they are put in larger batteries in a dif-

After the house has been thoroughly cleaned and disinfected, a new supply of litter should be supplied.



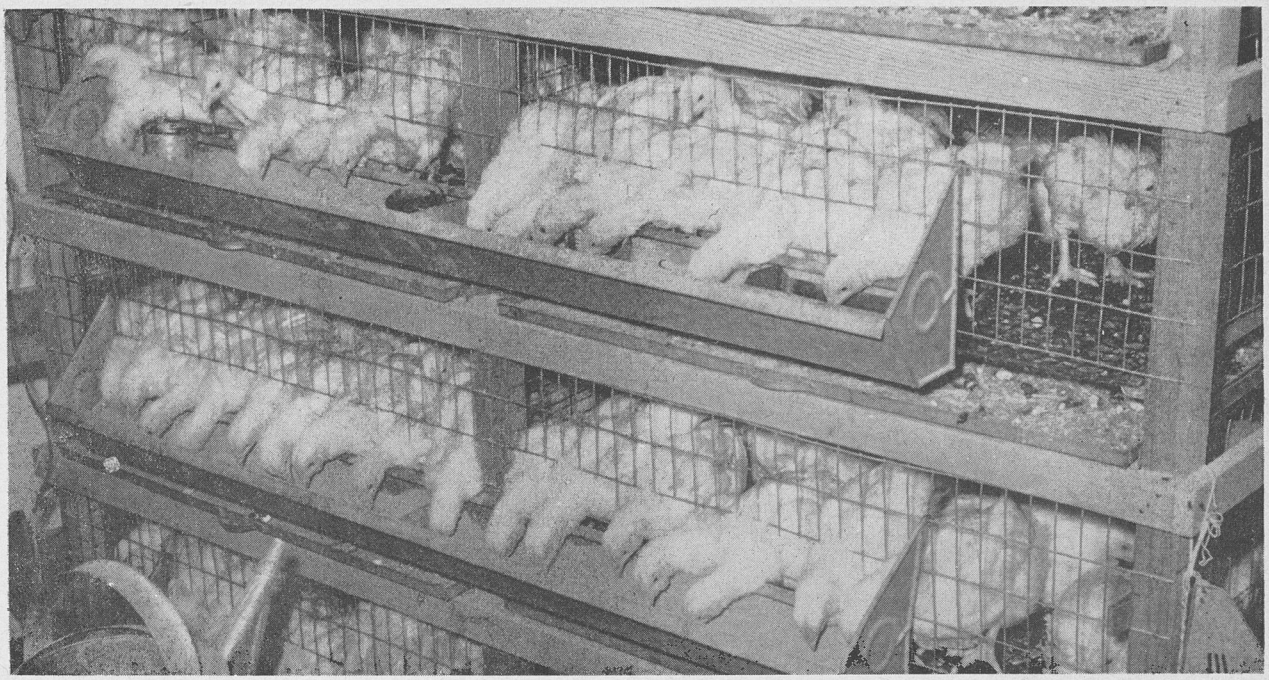
Here is an intermediate battery, used from three to six weeks.

ferent room or building. After they are six weeks old, they are moved to the finishing batteries in another room or building where they are kept until ready for market. This transfer of chicks, keeping those of the same ages, cuts down the danger from respiratory and other diseases.

The equipment is flexible enough that many kinds of buildings can be used, providing 10 feet of head room is available. In some cases, old factory buildings, barns, garages and sheds have done as well as new buildings. Three separate buildings are recommended. A small building can be used as a starting room, a slightly larger building for growing, and a still larger building for finishing. Each building should have a feed bin and a sink for washing equipment. Some heat, up to 65 or 70 degrees, should be provided in the starting room. Proper ventilation and humidity should be maintained in all buildings.

MINIMUM SPACE REQUIRED PER BIRD

Stage	Age	Square Inches
1st, Brooding	1-3 weeks	15
2nd, Growing	3-6 weeks	30
3rd, Finishing	6-12 weeks	60



Here is a finishing battery, where the chickens stay until ready for market.

ADVANTAGES

Definite number of finished birds can be ready for market each week.

Heavier weights quicker because of less set-back from coccidiosis.

More rapid growth up to 12 weeks of age. Slightly lower feed cost per pound of grain.

Since three times as many birds can be produced per square foot, the system is practical if price of land is high or amount of land is limited.

DISADVANTAGES

Investment per bird is higher.

Battery broilers must be slaughtered soon after removal from the battery.

Being soft meated, they shrink too much if shipped alive.

Danger of respiratory disease spread.

High percentage of breast blisters on cockrels make their production almost impossible.

In a city, disposal of droppings is a problem.

Higher labor cost because of sanitation measures which must be taken and because there are more feeders to be filled.

Under certain conditions, batteries can be recommended as suitable for broiler production. Of prime importance is the nearness to market so that excessive shrinking can be avoided. It is also desirable to have a preferred retail market for birds weighing two to two and one-half pounds, especially because of the steady weekly supply which can be produced. Birds of this weight can be produced in eight or nine weeks, thus giving a faster turnover.

POULTRY BULLETINS

From Your County Agricultural or Home Demonstration Agents

B-65 Poultry Houses for Texas
B-71 Poultry Yard Equipment
C-33 Feeding Hens for Egg Production
B-173 External and Internal Parasites of Poultry
B-206 Managing The Laying Flock
C-241 Poultry Production Guide for Texas
C-260 Keep Hens Happy
C-274 Culling Poultry for Profit
C-275 Turkey Management
C-285 Capons
C-298 Growing Chicks for Flock Replacement
FHH-368 Cannibalism in Chickens and Turkeys

From Your County Agricultural or Home Demonstration Agents or From the United States Department of Agriculture at Washington, D.C.

Farmers' Bulletin

801 Mites and Lice on Poultry
897 Fleas and Their Control
849 Capons and Caponizing
1070 Fowl Tick
1506 Breeds of Chickens: I. American
1507 Breeds of Chickens: II. American
1652 Diseases and Parasites of Poultry
1409 Turkey Raising

BULLETINS ON OTHER FOWLS

From Your County Agricultural or Home Demonstration Agents or From the United States Department of Agriculture at Washington, D. C.

Farmers' Bulletin

684 Squab Raising
697 Duck Raising
630 Birds Useful to the Farmer
767 Goose Raising
1391 The Guinea Fowl

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